



Munich Personal RePEc Archive

The effect of one-on-one assistance on the compliance with labor regulation. A field experiment in extremely vulnerable settings.

Cabrera, José María and Cid, Alejandro and Bernatzky, Marianne Bernatzky

Center of Applied Research on Economics at Universidad de Montevideo

31 December 2016

Online at <https://mpra.ub.uni-muenchen.de/84639/>

MPRA Paper No. 84639, posted 20 Feb 2018 07:04 UTC

The effect of one-on-one assistance on the compliance with labor regulation. A field experiment in extremely vulnerable settings.

José María Cabrera, Alejandro Cid, and Marianne Bernatzky*

December 31st, 2016

Abstract

This is the first paper to analyze the effects of intense personal assistance on the compliance with labor regulation, within a population of deeply disadvantaged informal workers, using a field experiment. We randomly assign one-on-one assistance to these workers, and, within this treatment group, we randomly assign money to cover the cost of fulfilling the legal requirements to get a permit to work on the streets. One month after the intervention, we find that a worker who receives one-on-one assistance is three times more likely to comply with the legal documentation required by the government than a worker in the control group. We also find that a worker who receives both one-on-one assistance and cost coverage is four times more likely to comply with the legal requirements. The findings of this study shed light on strategies to help highly vulnerable workers to comply with labor regulations. (*JEL* C93, D04, J46, J62, I30)

Keywords: case management; one-on-one assistance; randomized control trial; field experiment; labor regulation.

*Cabrera: Center of Applied Research on Economics at Universidad de Montevideo, Universidad de Montevideo, 2544 Prudencio de Pena St., 11600 Montevideo, Uruguay (e-mail: jmcabrera@um.edu.uy); Cid: Center of Research on Applied Economics at Universidad de Montevideo, Universidad de Montevideo (e-mail: acid@um.edu.uy); Bernatzky: Yale University (e-mail: marianne.bernatzkykohli@yale.edu). The authors thank María Cecilia Ramírez for superb research assistance, and would like to specially acknowledge María Laura Alzúa for her very helpful comments at different stages of this project. We are extremely grateful to Glenn Loury, Juan Camilo Cárdenas, Rob Blier, John Friedman, Dan Bjorkegren, Anna Aizer, Francisco Rojas, Felipe Berruti, Juan Dubra, Marcelo Caffer, Ignacio Presno, and Ana Balsa for providing helpful and detailed comments. We also benefited from a workshop at BIARI (Brown International Advanced Research Institute, at Brown University) and presentations at Universidad de Montevideo, at the Network of Income and Inequality Conference (NIP), at the Sociedad de Economistas del Uruguay (SEU), and at Banco Central del Uruguay. Any errors or omissions are our own. The authors declare that they have no relevant or material financial interests that relate to the research described in this paper. This research was supported by CEDLAS/IDRC/CIEDUR.

I. Introduction

In underprivileged settings, there is a weak compliance with labor regulations, despite more than a decade of reforms aimed at making it easier and cheaper (Bruhn & McKenzie, 2013). People working informally on the street is a phenomenon that is spread out in many countries, no matter if they are developed (Boels, 2014), developing (Cabrera & Cid, 2014) or underdeveloped (Bhowmik, 2012). There are many examples of street markets where goods are sold in informally assigned areas. In some cities, street vendors are very common, selling from snacks or beverages to flowers, books and paintings. Another example of these street jobs are squeegee men wiping windshields of cars stopped in traffic lights; street hawkers selling bags, sunglasses or handicrafts; rag-and-bone men collecting unwanted household items. In our field experiment we will work in one of these settings: the market of *cuidacoches*. They are socially excluded workers who unsolicitedly look after parked cars hoping to get a voluntary tip from drivers in Montevideo, Uruguay. This is a common practice in many Latin American countries. They are known as “viene-viene” or “franeleros” in Mexico, “cuida autos” or “guardias” in Chile, “franelinhas” in Brasil, “celadores”, “vigilantes” or “guachimanes” in Colombia, “cuidacarros” in Peru, or “trapitos” in Argentina

A large body of literature addresses the programs designed to foster compliance with labor regulation. These interventions: (a) offer information (Bruhn, de Andrade & McKenzie, 2015; de Giorgi & Rahman, 2013; de Mel, McKenzie & Woodruff, 2012; Galiani, Meléndez & Navajas, 2016; Campos, Goldstein & McKenzie, 2015); (b) provide monetary incentives (Bruhn, de Andrade & McKenzie, 2015; Montero & Assuncao, 2011; Campos, Goldstein & McKenzie, 2015; Campos, Goldstein & McKenzie, 2015; de Mel, McKenzie & Woodruff, 2012; Bruhn & Loeprick, 2016; Klapper & Love, 2010); (c) increase enforcement (Bruhn, de Andrade & McKenzie, 2015; Almeida & Carneiro, 2011); (d) simplify the bureaucratic procedures (Bruhn, 2009; Montero & Assuncao, 2011; Fajnzylber, Maloney & Montes-Rojas, 2012; Galiani, Meléndez & Navajas, 2016; Klapper & Love, 2010; Campos, Goldstein & McKenzie, 2015; Bruhn & McKenzie, 2013); (e) offer one-on-one assistance (Campos, Goldstein & McKenzie, 2015; Galiani, Meléndez & Navajas, 2016).

The methodological strategies applied in previous literature identify the isolated impact of more information, lower monetary costs, higher enforcement or simpler bureaucratic procedures. However, they provide no means to disentangle the impact of one-on-one assistance from other interventions¹. Our

¹ A recent study that took place over a similar time frame to our experiment Galiani, Meléndez, and Navajas (2016) in Bogotá, Colombia, also tries to foster compliance with labor regulations through personal assistance by agents of the Chamber of Commerce of Bogotá but the study is not able to disentangle the effect of one-on-one assistance from the effect of providing information personally or by workshops. In addition, an unpublished study from Campos, Goldstein, and McKenzie (2015) analyze the impact of one-on-one assistance on compliance with labor regulations but they are not able to isolate the effect of personal assistance from cost coverage of the demanded requisites.

research aims to close this gap. In addition, this study is the first to experimentally induce deeply vulnerable workers –representative of a significant population in many countries- to comply with labor regulations.

Evaluating the effect of one-on-one assistance may be crucial in extremely disadvantaged settings (National Association of Social Workers, 2013). This type of intervention (also labeled as “case management” in previous literature) involves offering help to understand the information about requirements, individualized assistance to cope with difficult procedures, and tailoring the *cuidacoches* to disrupt their predisposition to procrastination. We regard all of these elements as key features in a public policy focused on underprivileged street workers. One-on-one assistance would help to avoid problems that come from fragmentation of social services, staff turnover, and inadequate coordination among care providers.

In our study we focus on those *cuidacoches* that have no permit to work on the street. They could be considered the “poorest of the poor” within the *cuidacoches* population. As Table 1 reports, those who have no permit show less savings, less income, a lower rate of health coverage, a greater homeless rate, and worse indicators of external appearance and violent behavior. In addition, the individuals directly report that they see benefits in having the permit (see Table 2). Our experiment asks two straightforward questions: Are deeply disadvantaged informal workers more likely to fulfill the legal requirements of the municipal authority when they received one-on-one assistance? Is this likelihood affected by adding cost coverage of the legal requirements to the one-on-one assistance? Our randomized control trial includes two treatments: T1 offers one-on-one assistance, and T2 offers one-on-one assistance plus monetary cost coverage. A relevant part of the city was divided in 88 cells (which contained several street blocks), and each cell was randomly assigned to T1, T2 or a control group. 339 *cuidacoches* –that did not comply with labor regulation at baseline- took part in the field experiment. The differences in the completion rate with the legal requirements will provide a causal estimation of the effectiveness of one-on-one assistance. To measure our outcome variable (permit obtained) we were able to gather administrative data provided by the municipal government. This administrative data allows us to employ the real outcomes (that is, if the *cuidacoches*, according to the municipality’s registration, has or has not obtained the legal permit). Thus, we can reduce the measurement error caused by *cuidacoches*’ under or over reporting their compliance status at the follow-up.

One month after the intervention, we find that the *cuidacoches* who receive sole one-on-one assistance are about 14 percent points more likely to comply with the legal requirements to work on the street than the *cuidacoches* that receive no help. Given that the level of legal compliance in the control group is 8 percent, the likelihood that the *cuidacoches* assigned to T1 obtain the legal permit is approximately three times greater than the likelihood in the control group. We also find that the *cuidacoches* that receive one-on-one assistance plus cost coverage are about 23 percent points more likely

to comply with the legal requirements than the *cuidacoches* that receive no help. That is, the likelihood that the *cuidacoches* assigned to T2 obtain the legal permit is approximately four times greater than the likelihood in the control group.

The rest of this paper is organized as follows. Section II lays out the context of our study with basic background information on the market of *cuidacoches*. Section III describes the details of the experimental design. Section IV presents the main results. Section V concludes.

II. *Cuidacoches*' labor market

Consumers often give tips to workers as a way of payment for some services (Natter & Kaufmann, 2015). Among those workers commonly tipped, are vulnerable workers that offer a service associated with an informal right of usufruct. This is the case of informal car washers, street performers, golf caddies or car windshield cleaners at traffic lights.

As for the case of vehicles, we find those that unsolicitedly work on the street as parking valets and look after parked cars expecting a tip in return. Montevideo, the capital city of Uruguay, provides an ideal opportunity to study the compliance rate with labor regulation of highly deprived valets, in a voluntary payment market. This city has nearly 1,400,000 inhabitants (Uruguayan National Institute of Statistics, Census, 2011) and 540,000 cars (Intendencia Municipal de Montevideo, Department of Transport, 2015). It has experienced a sudden growth in the number of *cuidacoches* in the last two decades.

The *cuidacoches* market experienced a sudden growth in 2002, when the country suffered a severe economic crisis that left a large part of the population under the poverty line. Most of the workers absorbed by it were unskilled, given the precarious conditions that the job entails. What is more, it has consolidated over the last twenty years in a setting of sustained growth in the purchases of cars.

Cuidacoches are self-employed and are not constrained to a fixed schedule. They stand in a visible spot in the street, wearing a reflective jacket so that people can identify them, and take care of the parked cars. Usually, they also assist people in finding a parking space and parking their car. In some cases, there can be more than one *cuidacoches* in the same block, in which case they settle the issue of how to distribute the work themselves.

The vast majority of the *cuidacoches* work in the capital city of the country, where half of the country's population lives. In 2014, the number of *cuidacoches* in Montevideo – both registered and unregistered – is about 3,000 (Cabrera & Cid, 2014). Despite the municipality's aim to regulate this voluntary payment market, nearly half of them are unregistered.

Labor regulations for *cuidacoches*

Several attempts have been made to ban, regulate and legislate this practice in different parts of the world. The municipality of Montevideo – Intendencia Municipal de Montevideo (IMM) – has a long tradition of issuing regulations for the *cuidacoches* market. Some of these policies date back to 1933². Currently, the policy is to hand out permits which allow a *cuidacoches* to work in exclusivity on a certain block. To register themselves, the *cuidacoches* has to have a health certificate, the national identity card, and his criminal record (indicating if they have any criminal record or none). The registered *cuidacoches* have the property right to an specific area, which means the municipality will provide protection in case that another *cuidacoches* wants to work in the same place. Once they receive the legal permit, it is mandatory to go to the municipality offices to sign in a form once a month (a practical way to foster a closer relation with the municipal government), and to renovate his documents when they expire. The municipality could revoke the permit in case of misbehavior, complaints from drivers, etc. Table 3 shows that in 2014 the municipality has issued 180 permits and at the end of 2014, 100 of them expired.

Interestingly, although the monetary cost of the requirements to afford the permit is low (equivalent to one or two working days as a *cuidacoches*) and the benefit of this permit is large (the monopoly of the assigned block), only half of the *cuidacoches* have a permit. Many hypotheses may be explored to explain this finding. The *cuidacoches* may overemphasize the present and suffer extreme difficulty to think about long run consequences from immediate actions. There is evidence that the tradeoff between immediate outcomes compared to distant ones experiences hyperbolic discounting (McClure et al., 2004; Kable and Glimcher, 2007; 2010), or even, instead of thinking in the long run they rely on rules of thumb or past habits (Stanovich et al., 2012). Another possible explanation for the low rate of compliance to get the permit are the *cuidacoches*' concern about identity (the *cuidacoches* population is deeply disadvantaged) which dominates their general behavior. This means that they may care about the extent to which their behavior deviates from that of their social group (Fryer et al., 2012). In addition, the difficulty to obtain the documents that the municipality requires can be a major drawback (they are a deprived subpopulation with very little experience in administrative procedures and in dealing with state bureaucracy).

Given these hypotheses, one possible strategy that the municipality may explore to reach the goal of increasing *cuidacoches*' compliance with the legal requirements is one-on-one assistance. By offering help to "get it done now" the *cuidacoches* may change the way they make their decisions, reducing procrastination. Personal assistance provides a social component to nudge attempts in the required administrative process and can be tailored to individual circumstances. Though Lavecchia, Liu, and Oreopoulos (2014) focus

² These regulations can be read in the *Digesto Municipal*: http://imnube.montevideo.gub.uy/share/s/W-5G1M8vS_WgeY1BuFZSEw

especially on education, they develop a general framework for thinking about behavioral barriers and offer paths for solutions.

III. Experimental Design

A. Study Setting and treatments

We have been studying the *cuidacoches*' market since 2013, and collected, built and analyzed a data base of about 700 *cuidacoches* (Cabrera & Cid, 2014, and Blanco, Cabrera & Cid, 2016). This previous research has helped us to explore hypotheses and mechanisms, in order to design the present field experiment.

The previous data base of 700 *cuidacoches* (built from the surveys applied in 2013 and 2014) helped us to identify the blocks of Montevideo with a greater chance of finding *cuidacoches* that have no permit. Thus, in October of 2015, 339 *cuidacoches* with no permit were identified and randomly assigned to one of three groups. *Cuidacoches* in the *control group* did not receive one-on-one assistance nor cost coverage of the expenses. They only received a two-page brochure (see figures A.1 and A.2 in the Appendix section) with the basic information to afford the municipality legal permit. Since all the individuals in our experiment were treated with information, the formalization rate for *cuidacoches* in our experiment should be higher than what would have been in the absence of the intervention. Nonetheless, this informational brochure doesn't bias our estimations since also T1 and T2 received it. There were several reasons to treat with information also the workers from our control group. Our prior work had shown that the lack of information was reported as a major reason for not having the working permit. Remarkably, this prior knowledge was confirmed in the baseline survey at the beginning of this intervention (Table 4, "I am not well informed about the procedures for getting the work permit"). Guided by the Ethics Committee, since the cost of the brochure was negligible for the budget of the experiment and we could benefit hundreds of poor workers, we decided to deliver the treatment information to all the participants.

Each *cuidacoche* in the *one-on-one assistance treatment* (T1 group) received, during October and November of 2015, the two-page brochure and the assistance of a social worker to personally help him get the municipality's legal requirements for the permit. The requirements are three: the national identity card; a health certificate (which is needed to get any formal job); a criminal record report (even when the person has no records). The cost of this treatment (social worker fee plus travel allowances) is approximately USD 89 (USD 79 assistant's fee, plus USD 10 travel allowances).

An important feature of the costs of the requirements is that it is gender biased. The health certificate for women requires, besides a standard blood test, a mammogram and a papanicolau test. She may get tested for free at a public health facility, but the waiting list may be of several days. This differential

difficulty against women to get the health certificate, is observed in Table 4. This table shows the weight of each reason declared by *cuidacoches* for not possessing a valid legal permit at the baseline (therefore, Table 4 includes both those who never got their work permit and those who had an expired one at the baseline). One out of two women states that the procedures to obtain the health certificate are too difficult, while one out of four men report this issue. Thus, a treatment defined as personal assistance shows potential gains to cope with intricate procedures.

The comparison of the *one-on-one assistance treatment* (T1) with the *control group* (C) allows us to measure the impact of providing personal assistance on getting the municipal legal permit.

The second treatment arm consists of *one-on-one assistance plus cost coverage treatment*. These *cuidacoches* received, during the months of October and November of 2015, the two-page brochure, the assistance of a social worker to help them in the procedures to achieve the municipality legal requirements for the permit, and the coverage of the costs demanded by the requirements. Table 4 shows that 31% of male *cuidacoches* and 33% of women report that they not have enough money to pay for the documents required by the legal permit. Thus, this second treatment shows also a real potential impact.

The cost coverage is not a future reimbursement: the social worker takes the *cuidacoches* to accomplish the national identity card, the document of criminal records, and the health card, and in each step the social worker pays for him at the clinic and public offices. The comparison of the two treatments allows us to explore the role of financial restrictions to get the municipal legal permit: the monetary costs to fulfill the requirements may be equivalent to two work days as a *cuidacoches*.

B. Data

We base our analysis on four databases (figure 1 reports the sequence of the data generation process): (1) during 2013 and 2014, we built two cross section databases that add up to 724 *cuidacoches*. We use this data for selecting the zones of the city that have more *cuidacoches*. We include the number of pre-treatment *cuidacoches* as balancing variable in the randomization procedure. (2) A baseline survey built at the beginning of the current intervention –the baseline survey started in the middle of March 2015 and ended in May 2015. We use this data to check the balancing condition at the *individual level* after the randomization at the *zone level*. (3) Administrative data provided by the municipal government, that contains the registration of all the *cuidacoches* of Montevideo that -at least once- had a legal permit, from 2002 up 2016. This administrative data from the municipality is key to our analysis because it allows us to build the main outcome variable: legal permit achievement in December 2015. Having the actual formalization of each *cuidacoches* in our sample avoids misreporting (what the *cuidacoches* declare may not

coincide with reality), and also it avoids missing values (*cuidacoches* who were untraceable by our team in the streets at the follow up survey). (4) The follow-up survey that took place from November 2015 to February 2016, on average 6 month post-intervention.

In Table 5 we present a set of descriptive statistics. These are collected via a survey administrated to *cuidacoches* without legal permit at the start of the program (data source #2). Ninety-one percent of them are male. The average *cuidacoches* is 43 years old, and has been working at the same block for 5.73 years. They work 9.6 hours per day. Twenty-seven percent of them had previously got a legal permit but it has now expired. The baseline survey also includes questions regarding the external appearance of the *cuidacoches*: only one out of four seems tidy, 7% seems influenced by drugs or alcohol, on average they show a regular dental care, and the average quality of language employed by a *cuidacoches* is between poor and normal (according to the subjective assessment of the interviewer).

C. Randomization

Randomization was done at a cell level (group of street blocks). The reason for implementing the randomization at the zone level, rather than at the individual level, is to reduce contamination. We didn't want to have two adjacent *cuidacoches*, one assigned to the control group and the other to one of the treatments, thus introducing contamination and possible biases in the experiment. Moreover, we exclude a buffer of one block on all sides of the grid cell. The *cuidacoches* working in buffer areas were not invited to join the program. Figure 2 shows a global view of the city with the 88 zones selected for the experiment. Figure 3 is a zoom of the downtown city area, where we can see more clearly the buffer areas between treated areas.

To implement the design, we exploit two previous surveys that we conducted in our prior research agenda (Cabrera & Cid, 2014; Blanco, Cabrera, & Cid, 2016). In those surveys we collected the distribution of *cuidacoches* across Montevideo. Now, for this field experiment, we imposed a grid to divide the city into similar areas in terms of the number of *cuidacoches*. To increase power, we balance on a vector of three variables at zone level which are likely to affect the rate of compliance with the legal requirements. These are: a) the number of *cuidacoches* in each cell (obtained from the databases built by Cabrera and Cid, 2014, and by Blanco, Cabrera and Cid, 2016); b) the number area of the cell, which is associated with the number of street blocks; and c) the number of cars in the cell (obtained by the Continuous Household Survey of Uruguay). Randomization is implemented via stratification in this vector of variables. We created groups of four zones which were similar in those strata and then randomly assigned two of them to control, one to T1 (*one-on-one assistance treatment*) and one to T2 (*one-on-one assistance plus cost coverage treatment*). Zones which were not assigned in the first round of the procedure were balanced using the number of *cuidacoches* and the zone surface area. From the 88 zones included in the randomization, 42 were assigned

to C, 23 to T1, and 23 to T2. The social workers were able to interview 339 *cuidacoches* in those zones, who did not have the legal permit (the *cuidacoches* who already had the working permit were neither interviewed nor included in the experiment).

Social workers were hired and trained by members of the research team. They received a package with printed materials for the intervention and an identification from the University. The package contains the manual of procedures, copies of the information brochure, copies of the survey, and a map. In order to avoid mistakes, each map identifies the cells (groups of blocks) of the control and treatment groups only for the specific part of the city where that social worker would apply the survey (see Figure 2). Each social worker went over all of the blocks in their corresponding cells and everytime they found a *cuidacoche* without a permit, they carried out the survey (each survey took about 30 minutes). If the *cuidacoches* belonged to treatment 1 (T1) or treatment 2 (T2) zone, the social worker encouraged the *cuidacoches* to obtain the documents required by the municipality, and tried to schedule a date to personally help him through the process. They aided them to understand the information and procedures, taking the *cuidacoches* through the entire process that ends in the offices of the municipality where the *cuidacoches* finally registers himself and obtains his legal permit. The total procedures may take 10 hours (7 hours at the different offices and 3 hours of travel) but it takes more than a day because it is necessary to have an appointment for each of the offices. The appointments are made on the phone or a web page, so the social worker may have to assist also to set these. For T2, the social worker, besides accompanying the *cuidacoches* through the entire process, he also pays the entire cost.

Only one *cuidacoche* refused to be surveyed. The field supervisor closely monitored social workers to help them in case they encountered any difficulty with the *cuidacoches* or with the procedure.

Table 6 presents the mean and standard deviations to check the balance condition for the variables used in the randomization procedure and other zone level variables obtained from Household Surveys. Interestingly, even though randomization was done at the zone level, the balance condition is also achieved at the individual level (Table 7). Recall that the individual baseline data was obtained during the baseline survey, after the randomization. The pairwise differences illustrate that both treatments are well balanced with respect to control and to one another, at zone and individual level.

D. Identification

Given that our research design is a randomized control trial, the identification strategy is straightforward. To evaluate the impact of the intervention, we start by considering both treatments separately:

$$y_{ic} = \alpha + \delta_0 treat_c + X_i' \beta_i + u_{ic} \quad (1)$$

where y_{ic} takes the value 1 if the *cuidacoches* i located in area c achieves the legal permit and 0 otherwise, and $treat_c$ takes the value 1 if the *cuidacoches* is assigned to the *one-on-one assistance* group (no matter if he received also the cost coverage). X_i is a vector of *cuidacoches*' characteristics. The standard errors of the estimates for this and all subsequent models are clustered by cells (group of street blocks). The coefficient of $treat_c$ in this specification is a consistent estimate of the average percentage change in the legal permit compliance from assignment to the treatments.

To evaluate the effect of each treatment on the permit possession we estimate:

$$y_{ic} = \alpha + \sum_{j=1}^2 \delta_{0j} treat_c^j + X_i' \beta_i + u_{ic} \quad (2)$$

Our measure of the legal permit attainment comes from administrative data provided by the municipality that registers every legal permit expedited. $treat_c^j$ denotes both treatment groups. δ_{0j} captures the causal effect of treatment j on permit compliance under the identifying assumption that $treat_c^j$ is orthogonal to u_{ic} .

Notwithstanding, the identifying assumption fails if there are spillovers between treatments and the control group. In the presence of spillovers, the control group is not a proper counterfactual for how *cuidacoches* in the treatment groups would have behaved in the absence of both treatments. This might be the case if, for example, *cuidacoches* in the control group change their behavior as a result of knowing that other *cuidacoches* have been offered one-on-one assistance and cost coverage of the requirements to afford the permit. To minimize contamination we have designed the experiment including two rules. First, as we have already explained, randomization was performed at the zone level. In this way, two *cuidacoches* working on adjacent blocks of the same street or around the corner in different streets, were given the same treatment, or were both included in the control group. The second rule was the inclusion of buffer zones. With this precaution method we tried to minimize spillovers from one zone to the other. Even if we had not included these precautions, we think that the probability of spillovers was very low. Indeed, we have data collected from a survey of *cuidacoches*, designed by Cabrera and Cid, eighteen months before the current experiment (Cabrera & Cid, 2014). This data shows that the median *cuidacoches* reported very low levels of connection with nearby *cuidacoches*.

Another possible concern of field experiments is that the evaluation itself may cause the treatment or comparison group to change its behavior. Changes in behavior among the treatment group are called Hawthorne effects, while changes in behavior among the comparison group are called John Henry effects (Duflo, Glennerster & Kremer, 2006). The treatment group may be conscious of being observed, which may

induce them to alter their behavior for the duration of the experiment (for example, working harder to make it a success). The comparison group may feel despised and react by also altering their behavior (perhaps lowering its effort). In the present study we have tried to minimize the possibility of these biases: we personally trained the social workers to avoid any commentary to *cuidacoches* that may induce them to think that they are part of an experiment.

As we mentioned in a previous section, one out of two women states that the procedures to obtain the health certificate are complicated, while one out of four men states the same. The costs of requirements seems to be gender biased. The health certificate in the case of women demands more previous clinical studies. She may be tested for free at public health facility but she may cope with a waiting list of several days. Thus, a treatment defined as personal assistance shows potential gains to cope with these difficulties. To evaluate the possible heterogeneity by gender on the impact of the interventions, we estimate equation (1) including the treatment interacting with the dummy female:

$$y_{ic} = \alpha + \delta_0 treat_c * female_i + \delta_1 treat_c + \delta_2 female_i + X_i' \beta_i + u_{ic} \quad (3)$$

IV. Results

Table 8 reports results from the OLS estimator. Columns 1 to 3 display results from equation (1), and they show that a worker that receives one-on-one assistance is three times more likely to comply with the legal documents required by the government than a worker that does not receive the support. Columns 4 to 6 displays the results of the OLS estimator of δ_{01} and δ_{02} , in equation (2). Both coefficients are significantly different from zero, and this fact holds also including different controls. It shows that one-on-one assistance is effective to increase the compliance rate with the permit requirements. The likelihood of fulfilling the requirements to achieve a legal permit is 14 percentage points higher for *cuidacoches* in the *one-on-one assistance treatment* than the control group; this represents a threefold increase over the mean of the *control group*. Column 4 shows that the one-on-one assistance plus cost coverage is effective to increase the rate of compliance with the legal requirements. *Cuidacoches* in the *one-on-one assistance plus cost coverage treatment* show a 23 percentage point increase in the likelihood of compliance with the legal requirements in comparison to the *control group*. This represents a likelihood of compliance with the legal requirements that is four times the likelihood of the *control group*. And, interestingly, the estimate of the rate of compliance of the control group (8 percent) seems to be the upper-bound of the real rate because: a) the possible contamination effect from individuals of the treatments groups that work few blocks away and may

transmit positive experiences towards legalization; b) probable general equilibrium effects: a *cuidacoches* of the control group may observe that many other *cuidacoches* are obtaining their permits and thinks that this could end in an equilibrium where only the *cuidacoches* with legal permit may keep their segments of streets.

Notwithstanding the notorious difference between the $\hat{\delta}_{01}$ and $\hat{\delta}_{02}$, we cannot reject the null hypothesis that δ_{01} and δ_{02} are equal (t value of the difference is 1.36).

Table 9 reports the estimates of the specification (equation 3) that includes an interacting term (treatment and female). Though the coefficient is positive and may show that the treatment has a special effect on female, we are not able to reject the null hypothesis that there's no interacting effect (it could be a problem of statistical power because women make up only 10 per cent of the sample.).

Table 10 presents the results of a mean comparison by getting a work permit within treatment group. This allows us to examine which characteristics of *cuidacoches* might be correlated with greater demand for regularization. We find statistical evidence of the demand being higher among older workers ($p=0.05$), which might be because vulnerable elders are more prone to secure their job (the Municipality and the police protect the regularized *cuidacoche* if someone tries to take them out of their assigned block). *Cuidacoches* that had an expired work permit seem to be more likely to get a new one in comparison to those who never got one ($p=0.05$), perhaps because they are already familiarized with the procedures required to get the permit and they just needed a little nudge from the social worker to accomplish the requirements.

We find other differences -though not significant- among treatment group. As women are more vulnerable, they seem to be more likely to formalize and receive the municipal authorities' protection. In addition, those who seem to be making a living from taking care of cars (work more hours per day as *cuidacoches* and have been doing the job for more years), are also more open to comply with labor regulations. There is no significant difference in the demand for regularization by the number of minors under care, years of education, and type index, although the standard errors are relatively large for some of the dimensions of heterogeneity. Overall, we view the results as indicating that those *cuidacoches* who are older and have had a work permit are more likely to comply with the labor regulations of the municipality.

V. Cost Analysis

We calculated total cost of the *one-on-one assistance plus cost coverage treatment* at USD 123 per *cuidacoche* (Section A1 of the appendix shows the components of the cost in detail). This include the payment of the assistant (USD 79), the coverage of the costs of the documents required (USD 34 if they are issued in the most expensive procedure and the *cuidacoches* has already no valid document), and travel

allowances for both the assistant and *cuidacoches* (USD 10). Though the assistant receives the travel allowances in advance, he receives her fees only if the *cuidacoches* achieves the legal permit form the municipality. The cost of the *one-on-one assistance treatment* is USD 89 (USD 79 assistant's fee, plus USD 10 travel allowances)³.

It is estimated that the population of *cuidacoches* in Montevideo is about 3,000, and only about 1,500 of them have the legal permit required by the municipality (Blanco, Cabrera, & Cid, 2016). If no intervention is applied, it is expected that at most 8 percent of the illegal *cuidacoches* end up getting a legal permit ($1,500 \times 0.08 = 120$ *cuidacoches*). With a program designed, for instance, as the *one-on-one assistance plus cost coverage treatment*, we may expect a 23 percent increase in the likelihood of receiving the legal permit, that is, a final figure of 465 *cuidacoches*, and the total cost would be USD 57,195.

At this point we cannot perform a traditional cost-benefit analysis because is not possible to estimate precisely the monetary benefits for the society of having legal *cuidacoches* in the streets, instead of informal ones. Nor we can estimate the benefit for a *cuidacoches* of being formal (i.e. less use of violence to protect their place in the street – as suggested by Blanco, Cabrera and Cid, 2014 – or better access to public health services due to the health card – as suggested by Martínez and Barreiro, 2015). The aim of this cost analysis section is to convey that the cost of these interventions is affordable. Recall that, at most, the intervention may cost USD 123 per *cuidacoches*. In terms of the average income of the *cuidacoches*, this cost is about 8 workdays. In terms of the minimum wage in Uruguay, the 123 USD cost of the intervention means one third of the monthly minimum wage.

VI. Conclusions

We conduct a field experiment to provide evidence on the effectiveness of the personal assistance approach to help deeply vulnerable populations. We design a *one-on-one assistance treatment* in the voluntary payment market of *cuidacoches*, where unsolicited work is offered on the street: looking after parked cars for a tip in return is an extended phenomenon in many countries.

Most of the workers absorbed by it were unskilled, given the precarious conditions that the job entails (they have to cope with multiple weather conditions, many of them homeless, with poor or no health coverage nor pension insurance, suffering a permanent deterioration of their human capital).

This type of market is of paramount importance for the understanding of contemporary phenomena such as those found in blocks where vehicles are washed by informal workers, streets where garbage is

³ As far as we know, there is only one study, in previous literature on compliance with labor regulation, that provides the monetary cost of a one-on-one assistance intervention (Campos, Goldstein, and McKenzie, 2015). Thus, our paper is also a contribution for this issue.

picked up in exchange for a voluntary financial compensation or in markets where goods are sold in informally assigned areas.

Several attempts have been made in different countries to regulate these practices, but governments have to deal with a difficult barrier: the behavioral obstacles in deeply vulnerable populations such as *cuidacoches*. Some of these behavioral barriers are procrastination, poor long-run decisions, overemphasizing of the present, perceived negative social identity, perplexity by the procedure to achieve the legal requirements, and too much reliance on routine. One-on-one assistance by a professional caregiver would have helped the *cuidacocha* to cope with these barriers to achieve the legal requirements for the permit.

Our contribution to previous literature on compliance with labor regulation is twofold: (a) we disentangle the pure effect of an intense one-on-one assistance program, and (b) we study this program within a deeply vulnerable population.

The context of our experiment is Montevideo, the capital of Uruguay, which experienced a huge increase in the number of *cuidacoches* during the 2000's. The municipality has a policy that demands legal permits to work as a *cuidacoches*, but only half of them comply. To answer the question of whether it is possible to help a very vulnerable population to comply with the legal requirements proposed by the authorities, we designed an experiment. By randomization we assigned irregular *cuidacoches* to a *one-on-one assistance treatment*. In addition, to explore the role of the financial restrictions to afford the legal requirements of the municipality, we randomly assigned illegal *cuidacoches* to a *one-on-one assistance plus cost coverage treatment*. We find that one-on-one assistance is effective to increase compliance with the legal permit, both as an isolated treatment or combined with cost coverage. The impact is economically relevant: while the control group experience a rate of compliance of 8 percent, the *one-on-one assistance treatment* increase the rate of compliance 14 percentage points (it represents a threefold increase in the likelihood of compliance in comparison to the control group), and the *one-on-one assistance plus cost coverage treatment* increase the rate in 23 percentage points (it represents an increase of four times in the likelihood of compliance in comparison to the control group).

The cost of the intervention is low both in terms of *cuidacoches*' daily income and in comparison with the minimum wage per day in the country. The designed treatments have two key components: the research assistants are subject to a financial rewards scheme (they receive the fees only if the *cuidacocha* gets the legal permit), and the money offered to the *cuidacoches* to cover the expenses of the legal documents is neither provided in advance nor reimbursed in the future: the assistant pay the documents directly when they are issued. In further research, we may study the effects of different rewards schemes for the social workers that assist the *cuidacoches* (for instance, instead of paying their fees at the end of the

experiment only if the *cuidacocha* gets the legal permit, we could test the effect of paying the assistance in advance for all the *cuidacoches* of the treatment group and by the end of the experiment ask the assistant to reimburse us for the *cuidacoches* that finally did not get the legal permit). We may also explore the impact of including, into the cost coverage of the *cuidacoches*, the opportunity cost of missing a work day (the multiple procedures to afford the legal requirements are high time-demanding).

Further research may explore the effects of one-on-one assistance on labor outcomes, on financial inclusion (getting a bank account), and on access to the health and pension system (the access to both health and retirement pensions is closely related with the access to the formal labor market). Thus, the findings of this study may foster further research, and shed light on strategies to help deeply vulnerable populations.

References

- Almeida, R., & Carneiro, P. 2012. Enforcement of labor regulation and informality. *American Economic Journal: Applied Economics*, 4(3), 64-89.
- Blanco, M., Cabrera, J. M., & Cid, A. (2016). *Beware: a woman is looking after your car* (No. 1601). Facultad de Ciencias Empresariales y Economía. Universidad de Montevideo.
- Bhowmik, Sharit. 2012. "Street vendors in the global urban economy". Taylor & Francis.
- Boels, D. (2014). It's better than stealing: informal street selling in Brussels. *International Journal of Sociology and Social Policy*, 34(9/10), 670-693.
- Bruhn, M. 2011. License to sell: the effect of business registration reform on entrepreneurial activity in Mexico. *The Review of Economics and Statistics*, 93(1), 382-386.
- Bruhn, M., & Loeprick, J. 2015. Small business tax policy and informality: evidence from Georgia. *International Tax and Public Finance*, 1-20.
- Bruhn, M., & McKenzie, D. 2013. Using administrative data to evaluate municipal reforms: an evaluation of the impact of Minas Fácil Expresso. *Journal of Development Effectiveness*, 5(3), 319-338.
- Bruhn, M., & McKenzie, D. (2014). Entry regulation and the formalization of microenterprises in developing countries. *The World Bank Research Observer*, 29(2), 186-201.
- Cabrera, J. M., and Cid, A. 2014. "Property rights in informal settings". Working paper. Universidad de Montevideo.
- Campos, F., Goldstein, M. P., & McKenzie, D. J. (2015). Short-term impacts of formalization assistance and a bank information session on business registration and access to finance in Malawi. *World Bank Policy Research Working Paper*, (7183).
- De Andrade, G. H., Bruhn, M., & McKenzie, D. (2014). A helping hand or the long arm of the law? Experimental evidence on what governments can do to formalize firms. *The World Bank Economic Review*.

- De Giorgi, G., & Rahman, A. 2013. SME's Registration: Evidence from an RCT in Bangladesh. *Economics Letters*, 120(3), 573-578.
- De Mel, S., McKenzie, D., & Woodruff, C. 2013. The demand for, and consequences of, formalization among informal firms in Sri Lanka. *American Economic Journal: Applied Economics*, 5(2), 122-150.
- Duflo, E., Glennerster, R., & Kremer, M. (2007). Using randomization in development economics research: A toolkit. *Handbook of development economics*, 4, 3895-3962.
- Fajnzylber, P., Maloney, W. F., & Montes-Rojas, G. V. 2011. Does formality improve micro-firm performance? Evidence from the Brazilian SIMPLES program. *Journal of Development Economics*, 94(2), 262-276.
- Fryer Jr, R. G., Kahn, L., Levitt, S. D., & Spenkuch, J. L. (2012). The plight of mixed-race adolescents. *Review of Economics and Statistics*, 94(3), 621-634.
- Galiani, S., Meléndez, M., & Navajas, C. (2015). *On the effect of the costs of operating formally: New experimental evidence* (No. w21292). National Bureau of Economic Research.
- Klapper, L. F., & Love, I. 2010. The impact of business environment reforms on new firm registration. *World Bank policy research working paper*, (5493).
- Kable, Joseph W., and Paul W. Glimcher. 2007. " The neural correlates of subjective value during intertemporal choice," *Nature Neuroscience* 10, 1625 - 1633.
- Kable, J. W., & Glimcher, P. W. (2010). An "as soon as possible" effect in human intertemporal decision making: behavioral evidence and neural mechanisms. *Journal of Neurophysiology*, 103(5), 2513-2531.
- Lavecchia, A. M., Liu, H., & Oreopoulos, P. (2014). *Behavioral economics of education: Progress and possibilities* (No. w20609). National Bureau of Economic Research.
- Levitas, R., Pantazis, C., Fahmy, E., Gordon, D., Lloyd, E., & Patsios, D. (2007). The multi-dimensional analysis of social exclusion.

- McClure, S. M., Laibson, D. I., Loewenstein, G., & Cohen, J. D. (2004). Separate neural systems value immediate and delayed monetary rewards. *Science*, 306(5695), 503-507.
- Monteiro, J. C., & Assunção, J. J. 2012. Coming out of the shadows? Estimating the impact of bureaucracy simplification and tax cut on formality in Brazilian microenterprises. *Journal of Development Economics*, 99(1), 105-115.
- Municipality of Montevideo (IMM, Intendencia Municipal de Montevideo). 2015. Department of Transportation. Retrieved on June 10th, 2016 from:
<http://www.montevideo.gub.uy/sites/default/files/biblioteca/vehiculosempadronadosal31122015.pdf>
- National Association of Social Workers. 2013. "NASW Standards of Social Work Case Management". Retrieved on April 10th 2016, from:
<https://www.socialworkers.org/practice/naswstandards/casemanagementstandards2013.pdf>
- Natter, Martin, and Kaufmann, Katharina. 2015. "Voluntary market payments: Underlying motives, success drivers and success potentials". *Journal of Behavioral and Experimental Economics*, 57: 149-157.
- Stanovich, K. E., West, R. F., & Toplak, M. E. (2012). Judgment and decision making in adolescence: Separating intelligence from rationality.
- Uruguayan National Institute of Statistics (INE, Instituto Nacional de Estadística). 2011. Census 2011. Retrieved on June 10th 2016, from <http://www.ine.gub.uy/web/guest/censos-2011>
- Uruguayan National Institute of Statistics (INE, Instituto Nacional de Estadística). 2014. Encuesta Continua de Hogares (Uruguayan Continuous Household Survey). Available at:
<http://www.ine.gub.uy/web/guest/encuesta-continua-de-hogares1>

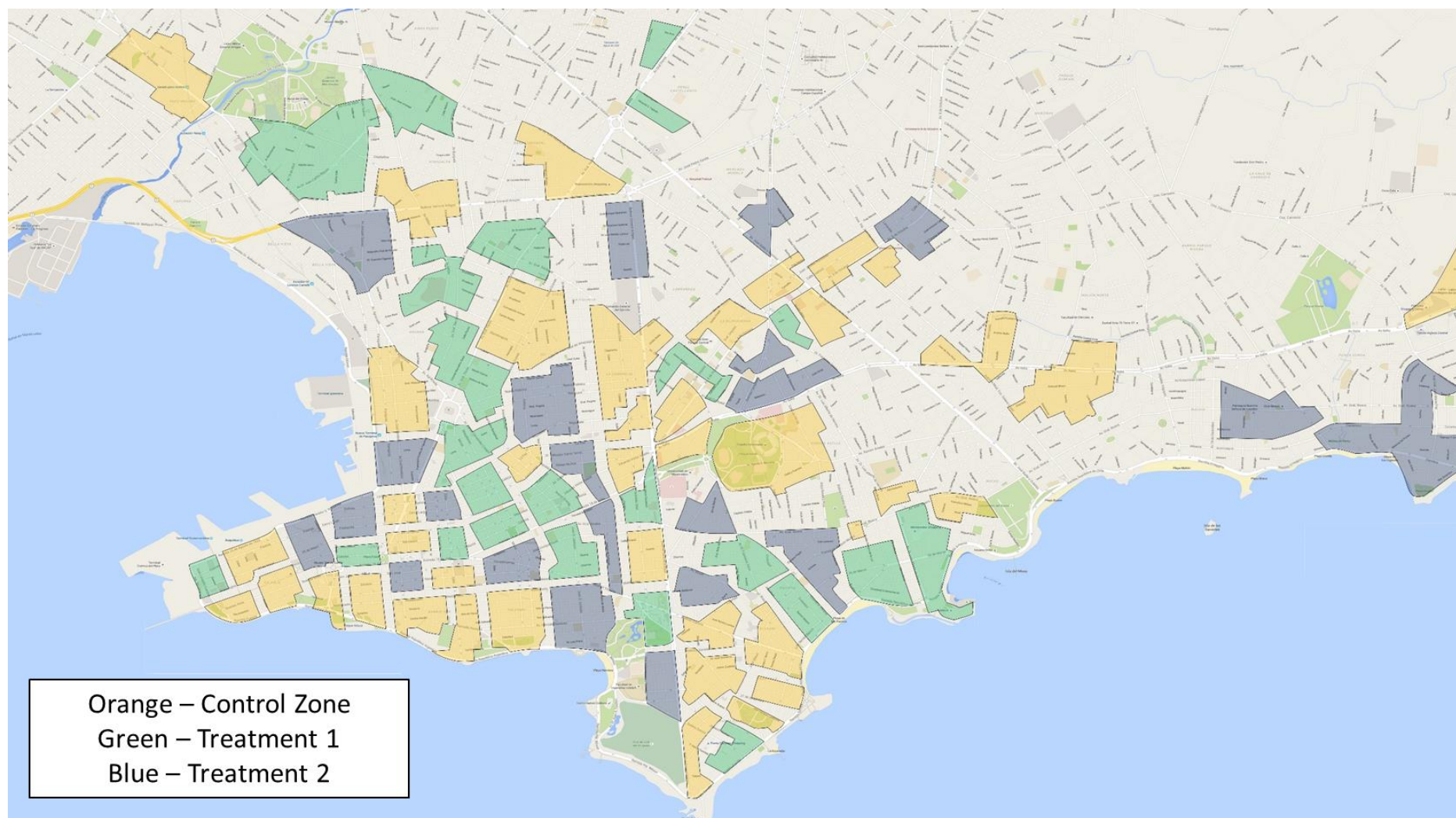


Figure 2. The highlighted zones contain the blocks selected to be divided into cells (Control, Treatment 1, and Treatment 2), in order to implement the randomization. These zones are the ones with the greatest density of *cuidacoches* (Cabrera & Cid, 2014). The individual blocks of Montevideo are marked in black in the map.



Figure 3. Example of randomization of map cells into treatment groups. Between the experimental cells there are buffer zones of one block which were not included in the experiment.

Table 1 - Well-being associated with work permit

Outcome:	(1) Monthly payment in logs (Earnings working caretaking cars in the block)	(2) Savings (= 1 if the cuidacoches has spare money at the end of the month, 0 if he has nothing left to save)	(3) Homeless (= 1 if the cuidacoches is homeless)	(4) Health Care (= 1 if the cuidacoches has his health covered either by himself or through his couple, 0 if he doesn't have health coverage)	(5) Type Index (Indicator of external appearance: language, substance abuse, dental care and tidiness; the higher the index (from 0 to 4), the poorer the condition)	(6) Violence Index (Indicator of usage of violence for protecting the workplace; the higher the index (from 0 to 2), the more violent the person)
Having the work permit	0,150***	0,100***	-0.11***	0.18***	-0.49***	-0,200***
Controls:						
Age	Yes	Yes	Yes	Yes	Yes	Yes
Female	Yes	Yes	Yes	Yes	Yes	Yes
Years of education	Yes	Yes	Yes	Yes	Yes	Yes
Observations	532	434	538	498	511	503

Note: OLS estimates (each estimate includes a constant, but it is not showed in the table).

Source: survey 2013.

*** Significant at the 1 percent level.

** Significant at the 5 percent level.

*Significant at the 10 percent level.

Table 2 - Benefits of having the work permit

	Mean	S.D.	Min	Max	#Obs.
<i>Benefits of having the work permit, reported by cuidacoches <u>with</u> a valid work permit (*)</i>					
I own the block, no one can take me out from it	0.75	0.43	0.00	1.00	327
The police protects me if someone tries to take me out of the block	0.24	0.43	0.00	1.00	327
I get better tips	0.15	0.36	0.00	1.00	327
I find useful the vest the IMM gives me	0.13	0.34	0.00	1.00	327
I want to pay the PBS monotax	0.04	0.20	0.00	1.00	327
<i>Estimated benefits of having the work permit, reported by cuidacoches <u>without</u> a valid work permit (**)</i>					
There is no benefit	0.42	0.49	0.00	1.00	200
It gives me confidence/I feel more secure	0.30	0.45	0.00	1.00	200
I own the block, no one can take me out from it	0.24	0.43	0.00	1.00	200
The police protects me if someone tries to take me out of the block	0.13	0.33	0.00	1.00	200
I get better tips	0.07	0.25	0.00	1.00	200
I find useful the vest the IMM gives me	0.06	0.24	0.00	1.00	200
Note: (*) Source survey 2013. (**) Source follow up survey November 2015 - April 2016.					

Table 3 - Municipality Database

Variable	Description of variables	Total	Percentage
Total	Number of permits provided to cuidacoches	181	-
“Active”	Cuidacoches with an unexpired work permit	81	45%
“Inactive”	Cuidacoches with an expired work permit	100	55%
Women	Number of permits provided to female cuidacoches	30	16%
Men	Number of permits provided to male cuidacoches	151	84%
Age	Average age in years	52	-
Women’s Age	Average women’s age in years	52	-
Men’s Age	Average men’s age in years	52	-

Note: Source Municipal Authorities database. Data corresponding to the inflow for year 2014.

Table 4 - Reasons for not having a legal or valid work permit: Mean Comparison by Gender

	Men	Women	Difference	S.E.	p-value	#Obs.
It is complicated getting the health card	0.29	0.47	0.18**	0.09	0.05	338
I cannot lose working hours on procedures	0.27	0.13	-0.14*	0.09	0.10	338
Having the permit is not necessary for working here	0.32	0.17	-0.15	0.09	0.09	338
The procedures for getting the work permit are complicated(*)	0.13	0.00	-0.13	0.08	0.11	246
I have never had my judicial records(*)	0.13	0.06	-0.07	0.08	0.42	246
The IMM is far away	0.07	0.13	0.06	0.06	0.23	338
I do not have enough money to pay for/renew the work permit	0.31	0.33	0.02	0.09	0.78	338
I have no desire to get the work permit	0.21	0.20	-0.01	0.08	0.92	338
I am not well informed about the procedures for getting the work permit(*)	0.35	0.35	0.00	0.12	0.99	246

Note: This table includes the reasons why those who never got a work permit do not have one and the reasons why those who have an expired work permit do not renew it.

(*) Answer options only available for those who never got their work permit.

Source baseline survey, March-May 2015.

*** Significant at the 1 percent level.

** Significant at the 5 percent level.

*Significant at the 10 percent level.

Table 5 - Definition and Description of Variables

Variable	Description of variables	Mean	S.D	Min	Max	#Obs.
Female	1 if the person is female, 0 otherwise	0.09	0.28	0.00	1.00	339
Years working as a cuidacoche	Number of years the person has worked in the block as a cuidacoche	5.73	6.77	0.04	39.00	339
Age	Age in years	42.80	14.02	17.00	82.00	332
Hours per day working as a cuidacoche	Hours worked on an average weekly day	9.56	2.74	3.00	16.00	339
The cuidacoche had a legal permit but expired	1 if the person has got a work permit but it has expired and 0 if the person has never got it	0.27	0.45	0.00	1.00	339
Type Index	Index composed of four dummy variables: physical appearance, denture condition, substance abuse and language of the cuidacoche observed by the interviewer. The higher the index (from 0 to 4), the poorer the condition.	0.76	0.94	0.00	4.00	258
Years of education (*)	Years of completed education	5.89	2.89	0.00	16.00	226
Minor children (*)	Number of minor children under their care	0.55	1.07	0.00	8.00	246

Note: Source baseline survey, March-May 2015.
 (*) Source follow up survey, November 2015 - April 2016.

Table 6 - Mean Comparison of Baseline Characteristics (zone level data)

	T1	C	Diff.	S.E.	p-value	#Obs.	T2	C	Diff.	S.E.	p-value	#Obs.	T2	T1	Diff.	S.E.	p-value	#Obs.
Cuidacoches (number)	5.70	5.00	-0.70	-1.03	0.50	65	5.09	5.00	-0.09	-1.02	0.93	65	5.09	5.70	0.61	-1.36	0.66	46
Area	307.02	322.02	15.00	-54.60	0.78	65	346.96	322.02	-24.94	-58.17	0.67	65	346.96	307.02	-39.94	-63.67	0.53	46
Cars (avg by Hhold)	0.42	0.45	0.03	-0.06	0.70	65	0.47	0.45	-0.02	-0.07	0.74	65	0.47	0.42	-0.05	-0.08	0.56	46
Residential dwellings (number)	567.73	570.81	3.08	-42.97	0.94	65	570.94	570.81	-0.13	-44.82	1.00	65	570.94	567.73	-3.21	-42.59	0.94	46
Households (number)	530.35	518.60	-11.75	-38.51	0.76	65	533.46	518.60	-14.86	-40.95	0.72	65	533.46	530.35	-3.11	-40.03	0.94	46
Apartments (pct)	0.71	0.68	-0.03	-0.05	0.51	65	0.68	0.68	-0.00	-0.05	0.91	65	0.68	0.71	0.03	-0.06	0.62	46
Rooms (avg number)	3.21	3.20	-0.01	-0.12	0.95	65	3.29	3.20	-0.09	-0.13	0.53	65	3.29	3.21	-0.08	-0.16	0.63	46
Habitants (avg by hhold)	2.28	2.31	0.03	-0.07	0.62	65	2.32	2.31	-0.01	-0.07	0.90	65	2.32	2.28	-0.04	-0.08	0.60	46
Owner (pct)	0.50	0.53	0.03	-0.03	0.30	65	0.52	0.53	0.01	-0.03	0.75	65	0.52	0.50	-0.02	-0.03	0.57	46
Age	40.76	41.12	0.36	-0.58	0.54	65	40.51	41.12	0.61	-0.55	0.27	65	40.51	40.76	0.25	-0.72	0.73	46
Primary education (avg)	0.14	0.15	0.01	-0.01	0.48	65	0.14	0.15	0.01	-0.01	0.39	65	0.14	0.14	0.00	-0.02	0.92	46
Employed (pct)	0.55	0.55	0.00	-0.01	0.74	65	0.56	0.55	-0.01	-0.01	0.32	65	0.56	0.55	-0.01	-0.01	0.51	46
Retiree (pct)	0.17	0.17	0.00	-0.01	0.72	65	0.16	0.17	0.01	-0.01	0.16	65	0.16	0.17	0.01	-0.01	0.39	46

Note: The number of cuidacoches in each cell come from Blanco, Cabrera and Cid (2016). The number of cells is 88 (42 correspond to “Control” (C), 23 to “Treatment 1” (T1) and 23 to “Treatment 2” (T2)).

The data come from the Uruguayan National Institute of Statistics (2014).

Randomization was performed using the first 3 variables of the table to stratify.

*Significant at the 1 percent level.

*Significant at the 5 percent level.

*Significant at the 10 percent level.

Table 7 - Mean Comparison of Baseline Characteristics

	Treatment 1	Control	Diff.	S.E.	p-value	#Obs.	Treatment 2	Control	Diff.	S.E.	p-value	#Obs.	Treatment 2	Treatment 1	Diff.	S.E.	p-value	#Obs.
Female	0.08	0.09	0.01	0.04	0.82	263	0.08	0.09	0.01	0.04	0.70	268	0.08	0.09	0.01	0.05	0.90	147
Years working as a cuidacoche	5.90	5.45	-0.45	0.88	0.61	263	6.29	5.45	-0.84	0.90	0.36	268	6.29	5.90	-0.39	1.27	0.76	147
Age	43.00	42.70	-0.30	2.02	0.74	257	42.58	42.70	0.12	1.94	0.95	263	43.00	43.33	0.33	2.23	0.71	144
Hours per day working as a cuidacoche	9.10	9.70	0.60	0.37	0.10	263	9.60	9.71	0.11	0.36	0.74	268	9.60	9.10	-0.50	0.50	0.31	147
The cuidacoche had a legal permit but expired	0.27	0.27	0.00	0.06	0.96	263	0.29	0.27	-0.02	0.06	0.69	268	0.29	0.27	-0.02	0.08	0.77	147
Type Index	0.76	0.75	-0.01	0.13	0.94	263	0.79	0.75	-0.04	0.12	0.75	268	0.79	0.76	-0.03	0.17	0.86	147
Years of education (*)	5.92	5.86	-0.06	0.53	0.91	173	5.96	5.86	-0.1	0.45	0.82	179	5.96	5.92	-0.04	0.57	0.93	100
Minor children (*)	0.39	0.66	0.27	0.18	0.13	189	0.46	0.66	0.2	0.18	0.27	194	0.46	0.39	-0.07	0.15	0.64	109

Note: Source baseline survey, March-May 2015.

(*) Source follow up survey, December 2015 - March 2016.

*** Significant at the 1 percent level.

** Significant at the 5 percent level.

*Significant at the 10 percent level.

Table 8 – Treatment effect over obtaining the work permit

Outcome: Obtaining the work permit	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(Mean of the control group: 0.0833)								
T=T1+T2: One-on-one assistance for all cuidacoches, mixed with cost coverage for some cuidacoches	0.189*** (0.054)	0.186*** (0.053)	0.190*** (0.052)	0.182*** (0.043)				
T1: One-on-one assistance					0.142*** (0.068)	0.145*** (0.068)	0.150*** (0.070)	0.154*** (0.060)
T2: One-on-one assistance plus cost coverage					0.232*** (0.074)	0.223*** (0.070)	0.225*** (0.070)	0.209*** (0.056)
Controls:								
Age	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Female	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Years working as a cuidacoche	No	No	Yes	Yes	No	No	Yes	Yes
Hours per day working as a cuidacoche	No	No	Yes	Yes	No	No	Yes	Yes
The cuidacoche had a legal permit but expired	No	No	Yes	Yes	No	No	Yes	Yes
Type Index (Indicator of external appearance: language, substance abuse, dental care and tidiness)	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects: Pollster	No	No	No	Yes	No	No	No	Yes
Observations	339	332	332	332	339	332	332	332

Note: OLS estimates (each estimate includes a constant, but it is not showed); robust standard errors in parentheses.

We cluster standard errors at cell level (group of blocks) in all models.

Source: Municipal Authorities database (December 2015) and baseline survey (March-May 2015).

*** Significant at the 1 percent level.

** Significant at the 5 percent level.

*Significant at the 10 percent level.

Table 9 – Treatment effect by Gender

Outcome: Obtaining the work permit	(1)	(2)	(3)	(4)
Treatment=T1+T2: One-on-one assistance for all cuidacoches, mixed with cost coverage for some cuidacoches	0.185*** (0.052)	0.180*** (0.051)	0.189*** (0.050)	0.175*** (0.042)
Female	0.092 (0.092)	0.073 (0.089)	0.056 (0.082)	0.018 (0.072)
Treatment*Female	0.065 (0.149)	0.062 (0.147)	0.058 (0.144)	0.122 (0.140)
Controls:				
Age	No	Yes	Yes	Yes
Years working as a cuidacoche	No	No	Yes	Yes
Hours per day working as a cuidacoche	No	No	Yes	Yes
The cuidacoche had a legal permit but expired	No	No	Yes	Yes
Type Index (Indicator of external appearance: language, substance abuse, dental care and tidiness)	No	No	Yes	Yes
Fixed Effects: Pollster	No	No	No	Yes
Observations	339	332	331	331

Note: OLS estimates (each estimate includes a constant, but it is not showed); robust standard errors in parentheses.

We cluster standard errors at cell level (group of blocks) in all models.

Source: Municipal Authorities database (December 2015) and baseline survey (March-May 2015)

*** Significant at the 1 percent level.

** Significant at the 5 percent level.

*Significant at the 10 percent level.

Table 10 – Treatment Characteristics: Mean Comparison by Work Permit

	Treatment with permit	Treatment without permit	Difference	S.E.	p-value	#Obs.
Age	46.49	41.62	-4.87**	2.47	0.05	144
The cuidacoche had a legal permit but expired	0.40	0.23	-0.17**	0.08	0.05	147
Female	0.13	0.07	-0.06	0.05	0.24	147
Minor children (+)	0.29	0.48	0.19	0.16	0.25	109
Type Index	0.90	0.73	-0.17	0.19	0.36	147
Hours per day working as a cuidacoche	9.62	9.26	-0.36	0.54	0.51	147
Years of education (+)	5.79	6.02	0.23	0.61	0.71	100
Years working as a cuidacoche	6.42	5.98	-0.44	1.42	0.76	147

Note: Source baseline survey, March-May 2015.

(+) Source follow up survey, November 2015 - April 2016.

*** Significant at the 1 percent level.

** Significant at the 5 percent level.

*Significant at the 10 percent level.

Appendix

A1. Components of the costs of the legal requirements

A1.1 Identity card

One of the requirements is the national identity card. Its cost is relatively low (about USD 8) - the average daily income of a cuidacoches is USD 14 (Cabrera & Cid, 2015) - but the procedure may take some days: an appointment some weeks ahead is set through a phone call. On the appointed date, the procedure may take about an hour. An express procedure costs USD 14. Also, it is possible to get the identity card for free if a person demonstrate that he is below the poverty line.

A1.2 Report of criminal records

Once the cuidacoches has obtained the identity card, he should get her criminal record. This document is standard and it may be required to any employee. It reports if a person has a criminal record or not. The cost of the standard procedure is USD 2.5, and the express procedure costs USD 5.

A1.3 Health card

Finally, he has to get a standard health certificate which is mandatory for every worker in the country. This card implies clinical studies, and a check-up by a doctor and by a dentist. These clinical studies and check-up are basic, and in an hour you may get the health card. If the blood test or the check-up show anything wrong, the clinic may deny the issue of the health certificate or may issue a provisional one. It is mandatory to renew the health card every two years, but if you receive a provisional one, you may have a job but are obliged to renew it in a few months. There are no shortage of clinics that offer the health certificate, scattered across many neighborhoods for a low price (about USD 15). Also, a person that demonstrate that he is below the poverty line may afford the health card for free in some public health facilities. An important feature of the health card is that it demands more previous clinical tests for women. Even though the cost is the same (USD 15), she must get a mammogram and a papanicolau test. She may afford these tests for free at public health facilities but she may cope with a waiting list of several days.

SOLICITUD DE PERMISO DE CUIDA COCHE

Dirigirse a: Intendencia de Montevideo.
Entrada por Santiago de Chile 1275
Horario: 8:00 a 14:00 hrs
Teléfono: 1950 19 41

REQUISITOS

1. Elegir calle
desocupada



2. Certificado de
buena conducta



3. Cédula de identidad
(+ fotocopia)



4. Carnet de salud
(+ fotocopia)



5. 3 foto carnet



→ Cédula de identidad



Si desea renovarla:
Presentar nombre, apellido y fecha de nacimiento en
Dirección Nacional de Identificación (Geant o Rincón 665)

Si nunca obtuvo la cédula:

- 1) Solicitar en Indendencia (18 de julio 1360) y se otorga certificado de nacimiento. Luego dirigirse a Dirección Nacional de Identificación (Geant o Rincón 665).
- 2) Si está en situación de calle, debe presentarse en el MIDES a las 8hrs de lunes a jueves (18 de Julio 1453)

→ Carnet de salud



Requisitos
diferentes
(consultar)

3 opciones para obtenerlo:

- 1) Departamento de Clínicas Preventivas (Durazno 1242).

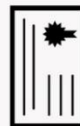
Horario: 8:00 a 12:00

*Si tiene carnet de asistencia el trámite no tiene costo

- 2) Intendencia de Montevideo (lunes a viernes de 8 a 10:30)

- 3) Cualquier mutualista o clínica privada

→ Certificado de buena conducta



Se solicita en la Dirección Nacional de Policía Técnica (Guadalupe 1513, de lunes a viernes de 7 a 17:30 hrs).

La persona se presenta con Cédula y se informa que es para presentar en la Unidad de Cuidadores de la Intendencia de Montevideo.

*Tener antecedentes no genera complicaciones para sacar el certificado

Figure A.1. Brochure of information page 1

Figure A.2. Brochure of information, page 2

Cédula de identidad

Para renovar cédula de identidad, se puede realizar una reserva común o de urgencia.

- **Reserva común:** Se da una fecha y hora en un plazo de 20 días con un costo de 209\$. Para pedir hora se hace en los mismos locales o en un local Abitab, Redpagos, correobank o al 09002101 (Ciudad vieja)/ 09002227 (Geant).
- **Reserva de urgencia:** Se da una fecha y hora en un día con un costo de 418\$. Para pedir hora se hace en los mismos locales o en un local Abitab, Redpagos, correobank o al 09002102 (Ciudad vieja)/ 09002228 (Geant).

Carnet de salud

- 1) Se puede retirar en el Departamento de Clínicas Preventivas en la calle Durazno 1242 (a 5 cuadras de la Intendencia). Es gratis presentando el carnet de asistencia y la cédula, o con un costo de 0,4 UR (322\$ el 1/3/2015) presentando solo la cédula. El horario de atención es de 8:00 a 10:30 de lunes a viernes. Para contactar con el centro: 29002951 y para pedir hora: 08008610 o en el mismo centro.
- 2) Se puede solicitar en la Intendencia de Montevideo de lunes a viernes entre 8:00 a 14:00 horas. Se requiere de cédula, el costo es de 414\$ o 207\$ presentando el carnet de asistencia. Por información contactar al 19503000 opción 4.
- 3) En cualquier mutualista privada, costos varían.

En general se pide Carnet de vacuna antitetánica, muestra de orina en frasco, 12 horas de ayuno, Certificado médico en caso de enfermedad crónica o bajo medicamentos, llevar lentes si utiliza. Para las mujeres entre 21 y 65 años se requiere Papanicolaou y para las mujeres entre 40 y 59 años se requiere una mamografía. Por más información contactar a IMM o Departamento de Clínicas Preventivas.

Certificado de buena conducta

El costo es de 80\$ el trámite común (15 días hábiles) o 160\$ el trámite urgente (2 días hábiles). Para contactar llamar al 22091612 interno 28.

Carnet de asistencia (opcional)

Se puede obtener en la oficina de ASSE en Cerro Largo 1816 esquina Fernández Crespo. El centro opera de 8:00 a 17:00 de lunes a viernes, el trámite tardará media hora y el certificado tiene una vigencia de 3 años.

Se requiere de los siguientes puntos y completar un formulario:

- Fotocopia de la cédula de identidad (se puede hacer en el mismo centro).
- Fotocopia de constancia de ingresos (se puede solicitar en el MIDES).
- Fotocopia de constancia de domicilio.

*Los costos son del 10/03/2015, podrían aumentar en el correr del año.